

U.S. Serial No.: 10/748,082

Amendment To The Claims

1. (Previously presented) A temperature controlled arrangement for housing an optical component, comprising:

- a package having an enclosure through which a plurality of electrical connections extend;
- at least one optical component located in the enclosure and electrically connected to at least one of the electrical connections;
- a first thermoelectric cooler located in the enclosure and in thermal conduction with the optical component;
- a temperature sensor located in the enclosure and electrically connected to at least one of the electrical connections; and
- a second thermoelectric cooler located external to the enclosure and in thermal conduction with the enclosure,

wherein at least one of the plurality of electrical connections electrically connects the first and second thermoelectric coolers and the first and second thermoelectric coolers are electrically connected in series.

2. (Canceled)

3. (Canceled)

4. (Previously presented) A temperature controlled arrangement for housing an optical component, comprising:

- a package having an enclosure through which a plurality of electrical connections extend;
- at least one optical component located in the enclosure and electrically connected to at least one of the electrical connections;
- a first thermoelectric cooler located in the enclosure and in thermal conduction with the optical component;
- a temperature sensor located in the enclosure and electrically connected to at least one of the electrical connections;

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a second thermoelectric cooler located external to the enclosure and in thermal conduction with the enclosure,

wherein at least one of the plurality of electrical connections electrically connects the first and second thermoelectric coolers and the first and second thermoelectric coolers are electrically connected in parallel.

5. (Original) The arrangement of claim 1 further comprising a temperature controller operatively controlling the first and second thermoelectric coolers.

6. (Canceled)

7. (Canceled)

8. (Original) The arrangement of claim 1 wherein the optical component is a laser diode.

9. (Currently amended) A temperature controlled arrangement for housing an optical component, comprising:

a package having an enclosure ~~through which a plurality of electrical connections extend;~~
at least one optical component located in the enclosure ~~and electrically connected to at least one of the electrical connections;~~

a first thermoelectric cooler located in the enclosure and in thermal conduction with the optical component;

a temperature sensor located in the enclosure ~~and electrically connected to at least one of the electrical connections;~~

a second thermoelectric cooler located external to the enclosure and in thermal conduction with the enclosure; and

a thermal conducting element in contact with an outer surface of the enclosure and a first surface of the second thermoelectric cooler,

wherein the first and second thermoelectric coolers are electrically connected in one of a series circuit or a parallel circuit.

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10. (Original) The arrangement of claim 1 further comprising a heatsink in contact with a second surface of the second thermoelectric cooler.
11. (Original) The arrangement of claim 5 wherein said temperature controller is a proportional controller.
12. (Canceled)
13. (Original) The arrangement of claim 1 wherein said temperature sensor is a thermistor.
14. (Currently amended) The arrangement of claim 1 further comprising a thermal conducting element in contact with an outer surface of the enclosure and a first surface of the second thermoelectric cooler.
15. (Previously presented) The arrangement of claim 4 further comprising a temperature controller operatively controlling the first and second thermoelectric coolers.
16. (Previously presented) The arrangement of claim 15 wherein said temperature controller is a proportional controller.
17. (Previously presented) The arrangement of claim 4 wherein the optical component is a laser diode.
18. (Previously presented) The arrangement of claim 4 further comprising a thermal conducting element in contact with an outer surface of the enclosure and a first surface of the second thermoelectric cooler
19. (Previously presented) The arrangement of claim 4 further comprising a heatsink in contact with a second surface of the second thermoelectric cooler.

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20. (Previously presented) The arrangement of claim 4 wherein said temperature sensor is a thermistor.

21. (Previously presented) The arrangement of claim 9 wherein at least one of the plurality of electrical connections electrically connects the first and second thermoelectric coolers.

Claims 22-24 (Cancelled)

25. (Previously presented) The arrangement of claim 21 further comprising a temperature controller operatively controlling the first and second thermoelectric coolers.

26. (Previously presented) The arrangement of claim 25 wherein said temperature controller is a proportional controller.

27. (Previously presented) The arrangement of claim 9 further comprising a temperature controller operatively controlling the first and second thermoelectric coolers.

28. (Previously presented) The arrangement of claim 27 wherein said temperature controller is a proportional controller.

29. (Previously presented) The arrangement of claim 9 wherein the optical component is a laser diode.

30. (Previously presented) The arrangement of claim 9 further comprising a heatsink in contact with a second surface of the second thermoelectric cooler.

31. (Previously presented) The arrangement of claim 9 wherein said temperature sensor is a thermistor.